

## PATENT ABSTRACTS OF JAPAN

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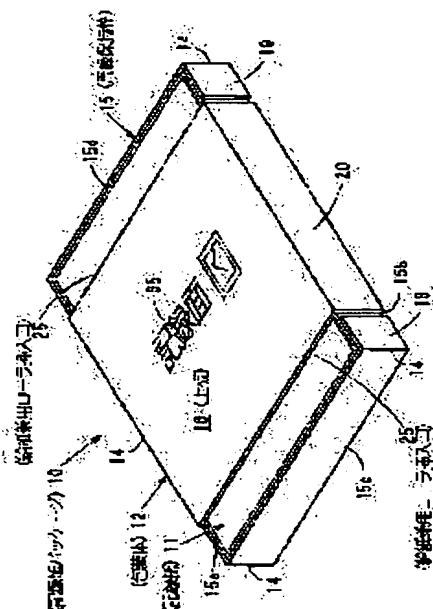
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## (54) RECORDING PAPER PACKAGE

## (57)Abstract:

**PROBLEM TO BE SOLVED:** To make a paper feed cassette chargeable with a recording paper package without worrying about its charging direction.

**SOLUTION:** Recording paper 11 is laminated, to store it in a packaging body 12. The packaging body 12 is constituted by a peripheral edge hold frame 15, upper plate 16, and a lower plate. A port 25 for both paper feed and roller insertion concurrently serving as a paper feed opening and a roller inserting port is formed in the upper plate 16 and the lower plate in the vicinity of both end parts of the packaging body 12. This port 25 for both paper feed and roller insertion is formed in a position of point symmetry relating to the center of the packaging body 12 and in its both sides. A paper feed roller is inserted in the packaging body 12 from the port 25 for both paper feed and roller insertion in the upper part. A recording paper pressing up member is inserted from the port 25 for both paper feed and roller insertion in the lower part, the recording paper 11 is pressed to the paper feed roller. The recording paper 11 is fed by rotating the paper feed roller. A paper feed cassette can be charged with a recording paper package 10 without worrying about its charging direction.



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**CLAIMS**

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[Claim(s)]

[Claim 1] By the feed roller and detail-paper Oshiage member which are the detail-paper package which carried out the laminating of the detail paper and contained it on the package object, and are arranged at a printer side In the recording paper package which is made to rotate a feed roller while pinching the recording paper by which the laminating was carried out, and sent out the recording paper from the package object through feed opening Make roller insertion opening with which a feed roller is inserted in said package object use also [ opening / said / feed ], prepare feed combination roller insertion opening, and this feed combination roller insertion opening in the location which serves as point symmetry to the core of a package object The detail-paper package characterized by having arranged more than one to one side or both sides of a package object, respectively.

[Claim 2] The detail-paper package according to claim 1 characterized by making said detail-paper Oshiage member insert in feed combination roller insertion opening which arranges said feed combination roller insertion opening to both sides of a package object, respectively, and has said feed roller caudad.

[Claim 3] By the feed roller and detail-paper Oshiage member which are the detail-paper package which carried out the laminating of the detail paper and contained it on the package object, and are arranged at a printer side In the recording paper package which is made to rotate a feed roller while pinching the recording paper by which the laminating was carried out, and sent out the recording paper from the package object through feed opening The detail-paper package characterized by having formed roller insertion opening with which a feed roller is inserted in said package object apart from said feed opening, being the location where each serves as point symmetry to the core of a package object, and having arranged two or more said feed openings and roller insertion openings to one side or both sides of a package object, respectively.

[Claim 4] Die length which intersects perpendicularly in the recording paper feeding direction of said roller insertion opening is made shorter than the die length of feed opening. And make roller insertion opening follow feed opening, and said feed opening and roller insertion opening are formed in both sides of a package object, respectively. Put an infeed line into both sides of said package object, and the superior lamella and inferior lamella in which said roller insertion opening was formed are constituted free movable in the direction of Oshiage of said recording paper Oshiage member. The recording paper package according to claim 3 characterized by applying said recording paper Oshiage member to the inferior lamella of the package object which has said feed roller caudad, and pushing up the recording paper.

[Claim 5] Said package object is a recording paper package claim 1 characterized by having the periphery maintenance frame which consists of one pair of maintenance side plates holding the both-sides section of the recording paper which carried out the laminating, and one pair of maintenance end plates holding the both ends of the recording paper which carried out the laminating thru/or given in any 4one.

[Claim 6] By the feed roller and detail-paper Oshiage member which are the detail-paper package which carried out the laminating of the detail paper and contained it on the package object, and are arranged at a printer side In the recording paper package which is made to rotate a feed roller while pinching the recording paper by which the laminating was carried out, and sent out the recording paper from the package object through feed opening The detail-paper package characterized by forming two or more openings so that said feed roller and said detail-paper Oshiage member may be inserted in said detail-paper package even if it loaded the printer with said detail-paper package with order or which sense of a front flesh side.

[Claim 7] Claim 1 characterized by having two or more sensibility data which are needed for adjusting the

sensibility difference by the manufacture lot with which said detail-paper packages differ, or product data which make the class of detail paper recognize thru/or a detail-paper package given in any 6one.

[Claim 8] The detail-paper package according to claim 7 characterized by preparing said sensibility data or product data in a point symmetry location to the core of a package object.

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**DETAILED DESCRIPTION**

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[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the detail-paper package used for a printer.

[0002]

[Description of the Prior Art] The detail-paper package which carried out the laminating of the detail paper and contained it on the package object is offered. A printer is directly loaded with this detail-paper package indirectly through a sheet paper cassette. And paper is fed to the recording paper sequentially from the recording paper of the maximum upper layer by pinching the recording paper by which the laminating was carried out and rotating a feed roller by the feed roller and recording paper Oshiage member which have been arranged at the printer or the sheet paper cassette.

[0003] If such a detail-paper package is used, it can load with the detail paper in the state of 1 settlement with which the package object was loaded. Therefore, since there is no possibility that a finger etc. may contact the recording surface of the recording paper, dirt of the recording paper does not arise. Moreover, generating of the concentration unevenness by ink etc. not adhering to homogeneity in adhesion of the fat of a finger etc. is suppressed.

[0004]

[Problem(s) to be Solved by the Invention] However, such a detail-paper package needs to load feed opening by the side of a printer with it, as feed opening is made consistent. Therefore, it needs to be careful of the sense of feed opening etc. Moreover, when it loads accidentally, it does not operate.

[0005] This invention is for solving the above-mentioned technical problem, and it aims at offering the detail-paper package with which it enabled it to load simply, without taking into consideration the loading direction of a detail-paper package.

[0006]

[Means for Solving the Problem] In order to attain the above-mentioned object, made roller insertion opening with which a feed roller is inserted in a package object use also [ opening / feed ] with the detail-paper package indicated to claim 1, feed combination roller insertion opening prepared, and more than one arrange to one side or both sides of a package object, respectively in the location become with point symmetry to the core of a package object about this feed combination roller insertion opening. In addition, it is desirable to make a recording paper Oshiage member insert in feed combination roller insertion opening which forms feed combination roller insertion opening in both sides of a package object, respectively, and has a feed roller caudad.

[0007] Moreover, with the detail-paper package indicated to claim 3, roller insertion opening with which a feed roller is inserted in a package object was formed apart from feed opening, and each is the location which serves as point symmetry to the core of a package object, and arranges two or more these feeding openings and roller insertion openings to one side or both sides of a package object, respectively. In addition, die length which intersects perpendicularly in the recording paper feeding direction of roller insertion opening is made shorter than the die length of feed opening. And make roller insertion opening follow feed opening, and these feeding opening and roller insertion opening are formed in both sides of a package object, respectively. It is desirable to put an infeed line into both sides of said package object, to constitute the superior lamella or inferior lamella in which said roller insertion opening was formed free movable in the direction of Oshiage of said recording paper Oshiage member, to apply said recording paper Oshiage member to the inferior lamella of the package object which has said feed roller caudad, and to push up the recording paper. Moreover, as for a package object, it is desirable to have the periphery maintenance frame which consists of one pair of maintenance side plates holding the both-sides section of

the recording paper which carried out the laminating, and one pair of maintenance end plates holding the both ends of the recording paper which carried out the laminating.

[0008] Moreover, with the detail-paper package indicated to claim 6, even if it loads a printer with a detail-paper package with order or which sense of a front flesh side, two or more openings are formed so that said feed roller and said detail-paper Oshiage member may be inserted in said detail-paper package. In addition, it is desirable to prepare two or more sensibility data which are needed for adjusting the sensibility difference by the manufacture lot with which detail-paper packages differ, or product data which make the class of detail paper recognize in a detail-paper package. Furthermore, it is desirable to prepare these sensibility data or product data in a point symmetry location to the core of a package object.

[0009] [Embodiment of the Invention] In drawing 1 and drawing 2, the detail-paper package 10 consists of detail paper 11 by which the laminating was carried out, and a package object 12 which contains this. The recording paper 11 is used as the sensible-heat mold, and the sensible-heat coloring layer is \*\*\*\*(ed) by one field. This recording paper 11 is in the condition which turned the base material up and turned the sensible-heat coloring side down, and the laminating of the 20 sheets is carried out and it is contained by the package object 12. In addition, in the case of the recording paper thick [ for a seal print ], ten sheets are contained. The receipt number of sheets of these recording papers 11 may be suitably changed according to the thickness of the recording paper 11 etc. Moreover, to the recording paper 11 down side of the lowest layer, the protection sheet of the same size as the recording paper 11 may be arranged if needed, and a sensible-heat coloring layer may be protected to it.

[0010] The package object 12 is equipped with the periphery maintenance frame 15, the superior lamella 16, and the inferior lamella 17, and is constituted by thin box-like one. The periphery maintenance frame 15 connects one pair of side plates 15a and 15b, and end plates 15c and 15d. This periphery maintenance frame 15 is made into the rectangle so that the periphery of the recording paper 11 may be held.

[0011] Drawing 2 shows the condition of having disassembled the package object 12. In this decomposition condition, the periphery maintenance frame 15 consists of end plate 15c which continued through the bending line 14, side plate 15a, 15d of end plates, and side plate 15b that follows an inferior lamella 17 through a bending line. And the connection pieces 18 and 19 made to follow an end plates [ 15c and 15d ] free edge through the bending line 14 are arranged. While the periphery maintenance frame 15 consists of joining these connection pieces 18 and 19 to the both ends of side plate 15b by the glue line, an inferior lamella 17 is fixed to the periphery maintenance frame 15.

[0012] In this periphery maintenance frame 15, it is put into the recording paper 11 which carried out the laminating. The junction piece 20 is connected to the side plate connection side edge of a superior lamella 16, and the side edge of an opposite hand through the bending line 14. After putting in the recording paper 11, the junction piece 20 is joined to side plate 15b through a glue line. Thereby, the detail-paper package 10 is constituted.

[0013] The feed lay length is shorter than side plates 15a and 15b, the superior lamella 16 and the inferior lamella 17 are carried out, and, thereby, the feed combination roller insertion opening 25 which served both as feed opening and roller insertion opening is formed between end plates 15c and 15d, a superior lamella 16, and an inferior lamella 17. As shown in this feed combination roller insertion opening 25 at drawing 3, when a sheet paper cassette 30 is loaded with the detail-paper package 10, the feed roller 31 enters from a top and the detail-paper Oshiage member 32 enters from the bottom.

[0014] Since this feed combination roller insertion opening 25 is formed in the vertical side of the both ends of the package object 12, respectively, it is lost that the loading direction of the sheet paper cassette 30 of the detail-paper package 10 is limited of it. In addition, the thermographic recording paper 11 is contained with this operation gestalt. Heat record will become impossible if a sheet paper cassette 30 is accidentally loaded with the front flesh side of the detail-paper package 10, since this thermographic recording paper 11 forms the sensible-heat coloring layer in one field of a base material. For this reason, the display 35 to show the recording surface of the recording paper 11 in a superior lamella 16 is printed. The label which has a display 35 may be stuck on the corresponding field instead of printing this display 35. Moreover, in the case of the usable recording paper, this display 35 becomes unnecessary with a natural thing, without identifying a front flesh side. In addition, instead of forming a sensible-heat coloring layer in one field of the recording paper 11, you may form in both sides and a display 35 becomes unnecessary also in this case.

[0015] Drawing 3 shows the condition of having loaded the sheet paper cassette 30 with the detail-paper package 10. The sheet paper cassette 30 consists of a body 40 of a cassette, and a lid 41, and a lid 41 is attached in the body 40 of a cassette free [ closing motion ] through the mounting shaft 42. The roller

opening 43 is formed in the lid 41, and the feed roller 31 is inserted in it from this roller opening 43 in the location corresponding to the detail-paper package 10.

[0016] The body 40 of a cassette is equipped with the stowage 44 of the detail-paper package 10. In the bottom of this stowage 44, the recording paper Oshiage member 32 is arranged in the location corresponding to the roller opening 43. The recording paper Oshiage member 32 is attached free [ frequent appearance ] toward the feed roller 31, and is energized up with the coil spring 45. Therefore, the detail paper 11 in the detail-paper package 10 is energized at a feed roller side, and the detail paper 11 is pushed against the feed roller 31.

[0017] In the case of feeding, the feed roller 31 descends in a feed location, and the top face of the recording paper 11 is contacted. Then, the feed roller 31 rotates in the feed direction, and the recording paper 11 is sent out to a printer side. In addition, other than recording paper 11 of the maximum upper layer, since a head is stopped by 15d of end plates of a periphery maintenance frame, duplex delivery of the recording paper 11 is not carried out.

[0018] Drawing 4 and drawing 5 show the full operation gestalt mostly constituted in one half instead of constituting roller insertion opening to the limit of the width of face of a detail-paper package. In addition, in this operation gestalt, it is the same as the operation gestalt which the configurations of a superior lamella 50 and an inferior lamella 51 differ, and also is shown in drawing 1 and drawing 2, and the same sign is given to the same configuration member. As shown in drawing 4 and drawing 5, the feed openings 48 are the vertical both ends of the package object 49, and are formed between the end plates 15c and 15d of the periphery maintenance frame 15, the superior lamella 50, and the inferior lamella 51. Moreover, the roller insertion openings 52 are the vertical both ends of the package object 49, and they are arranged so that the feed opening 48 may be followed.

[0019] If these feeding opening 48 and the roller insertion opening 52 pass along the central point CP of the package object 49 and rotate 180 degrees to the center line CL 1 vertical to a superior lamella 50, they are arranged in the point symmetry location which turns into the same location. Furthermore, these feeding opening 48 and the roller insertion opening 52 are arranged to the vertical center line CL 2 in the point symmetry location to end plates 15e and 15d through the central point CP of the package object 49.

[0020] Along with the superior lamella 50 and side plates [ of the periphery maintenance frame 15 / 15c and 15d ] bending line 14, it is put into the infeed line 55 near the both ends of a superior lamella 50. Similarly, along with the inferior lamella 51 and side plates [ 15c and 15d ] bending line 14, it is put into the infeed line 56 also near the both ends of an inferior lamella 51. Therefore, since inferior lamella partial 51a is located under the roller insertion opening 52 and this inferior lamella partial 51a is made free movable up by the infeed line 56, according to reduction by the activity of the recording paper 11, inferior lamella partial 51a changes up by upper energization of the recording paper Oshiage member 60. Thereby, the recording paper 11 can be certainly pushed against the feed roller 61.

[0021] Drawing 6 shows the detail-paper package 71 which has arranged the roller insertion opening 70 near the center section. The roller insertion opening 70 follows the feed opening 49, and is formed. And the feed roller 73 enters in the package object 74 from the roller insertion opening 70 of a superior lamella 72, and the recording paper 11 of the maximum upper layer is contacted. Moreover, as shown in drawing 7, the recording paper 11 is energized through inferior lamella partial 76a by the recording paper Oshiage member 75 arranged under the feed roller 73 at the feed roller 73 side. Thereby, paper can be certainly fed to the recording paper 11. And even if it makes order or the upper and lower sides into reverse and performs loading of the detail-paper package 71, it can print similarly. In addition, although the center line of the roller insertion opening 70 is shifted and being formed to the center line parallel to the feed direction in drawing 6 and drawing 7, this is made in agreement and may be formed in the center.

[0022] With said operation gestalt, although the thermographic recording paper was contained, the recording paper to contain is not limited to this. For example, the various recording papers, such as the recording paper for ink jets, and the recording paper for hot printing, a copy paper, may be contained. Moreover, in containing the recording paper which does not need to identify a front flesh side, the display 35 which identifies the table rear face of the recording paper becomes unnecessary. And the recording paper can be printed without a change in any way, even if it replaces not only order but a front flesh side.

[0023] Although one sheet of paper board was bent and the package object 12 was constituted from said operation gestalt, a detail-paper package may be constituted by constituting from the paper board with a periphery maintenance frame, and another superior lamella and inferior lamella on another object, and pasting these up. Moreover, the joining segment of a periphery maintenance frame may be connected suitably in a location, without being limited to the thing of said operation gestalt. Moreover, in the above-mentioned operation gestalt, although the feed combination roller insertion opening 25 and the roller

insertion openings 52 and 70 were formed in the same size in the location used as point symmetry, they may form such sizes in different size, without being limited to the same size.

[0024] Drawing 8 is the perspective view showing the detail-paper package which bar-code-ized the product data which make the class of detail paper recognize, and displayed them. This product classification bar code 80 is formed in the superior lamella 50 and the inferior lamella in the longitudinal direction of the roller insertion opening 52. These product classification bar code 80 as well as the roller insertion opening 52 is arranged to the core CP of the package object 81 in the point symmetry location. Therefore, even if the sense of loading of the package object 81 is any, the product classification bar code 80 can be certainly read with the bar code reader by the side of a printer. In addition, in drawing 8, the same sign is given to the same configuration member as drawing 4, and the duplicate publication is omitted.

[0025] Sensibility data required in order to adjust the sensibility difference by the manufacture lot instead of the above-mentioned product classification bar code 80 may be bar-code-ized, and you may prepare in the package object 81. Moreover, a sensibility bar code and a product classification bar code may be unified and displayed. Furthermore, it may replace with a bar code display and the mark by printing of a notch, a notation, an alphabetic character, etc., etc. may be used. Moreover, the data generating section may be constituted as a substitute of a bar code by embedding the IC memory other than record by printing etc. to the core of a package object in a point symmetry location.

[0026]

[Effect of the Invention] According to this invention, since two or more openings were formed so that a feed roller and a detail-paper Oshiage member might be inserted in a detail-paper package even if it loaded the printer with the detail-paper package with order or which sense of a front flesh side, it is lost that the loading direction is limited in the case of loading to the printer side of a package object. It can load now easily by losing definition of the loading direction by preparing feed combination roller insertion opening with which a feed roller is inserted especially, and two or more feed openings and roller insertion openings which were formed according to the individual in one side or both sides of a package object in the location which serves as point symmetry to the core of a package object, respectively. Moreover, since the maintenance frame which presses down the periphery of the recording paper on a package object was prepared, it is lost that the recording paper is omitted from a package object.

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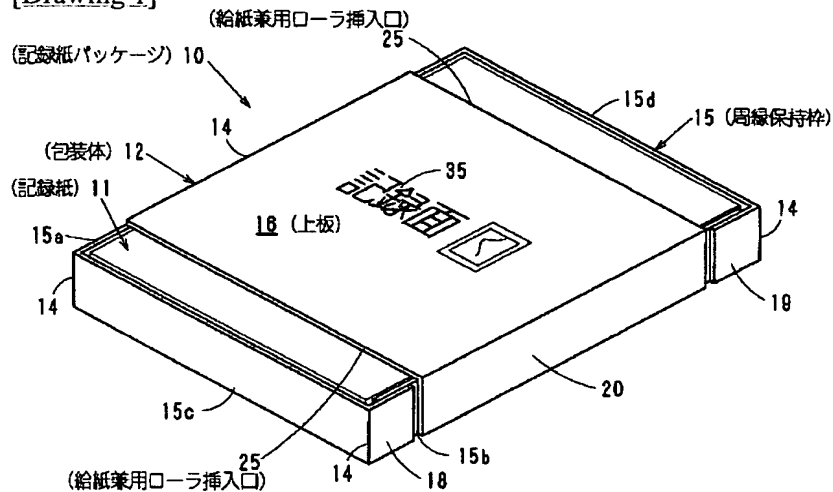
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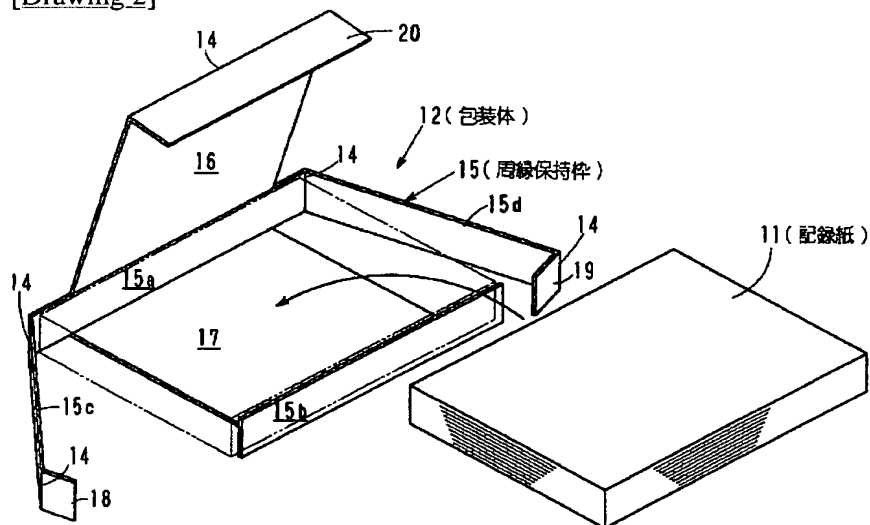
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## DRAWINGS

[Drawing 1]

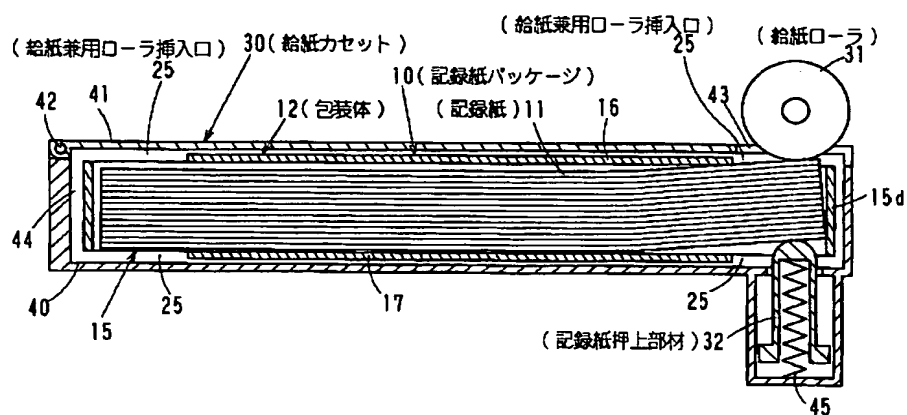


[Drawing 2]

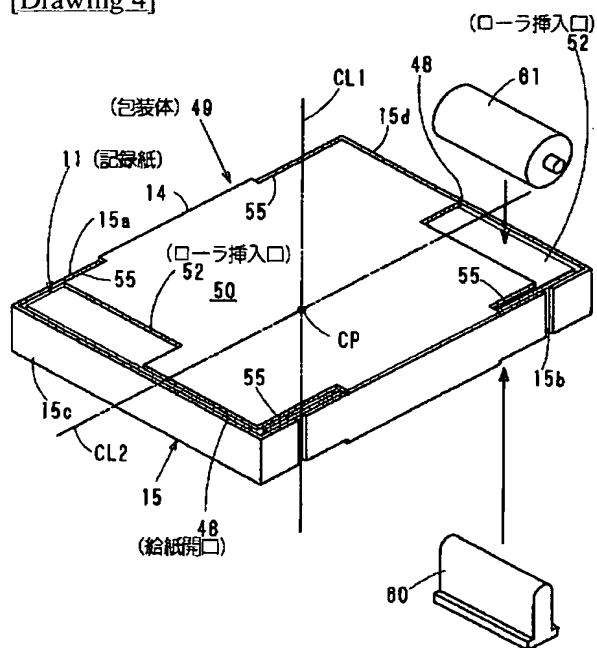


[Drawing 3]

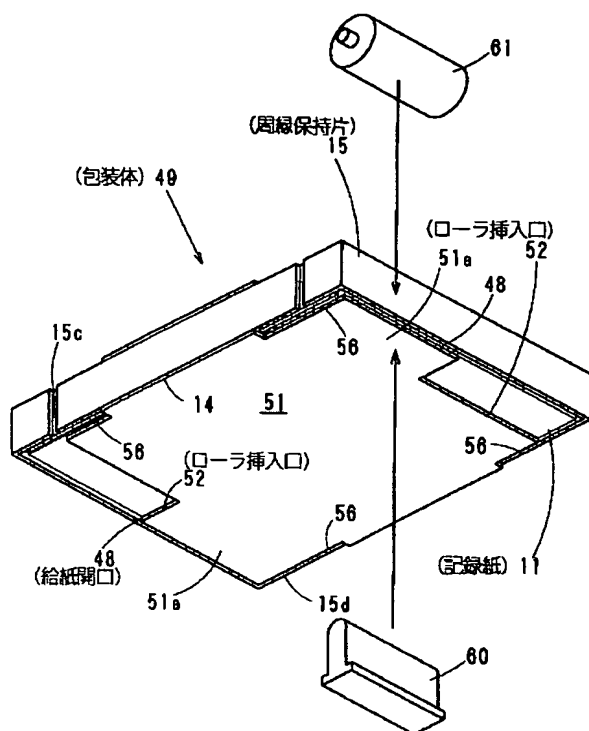




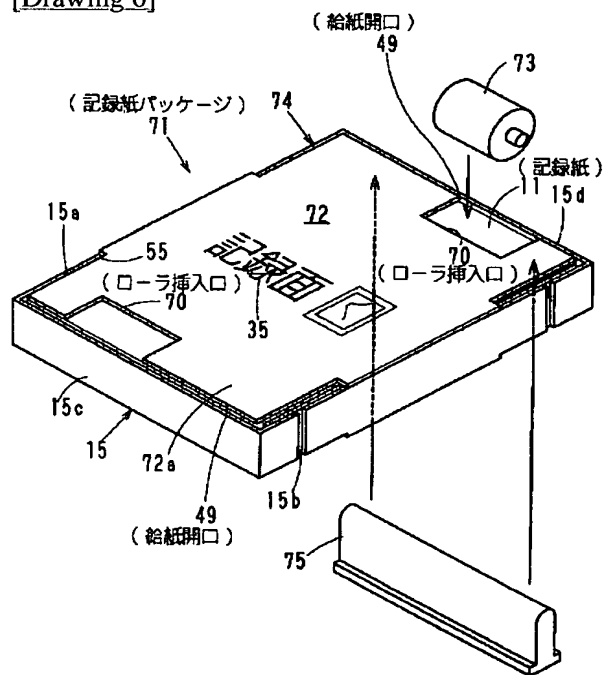
[Drawing 4]



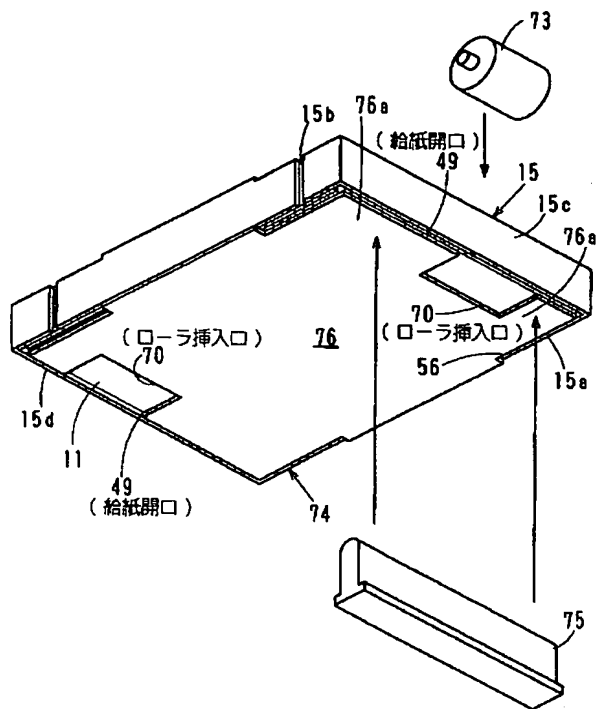
[Drawing 5]



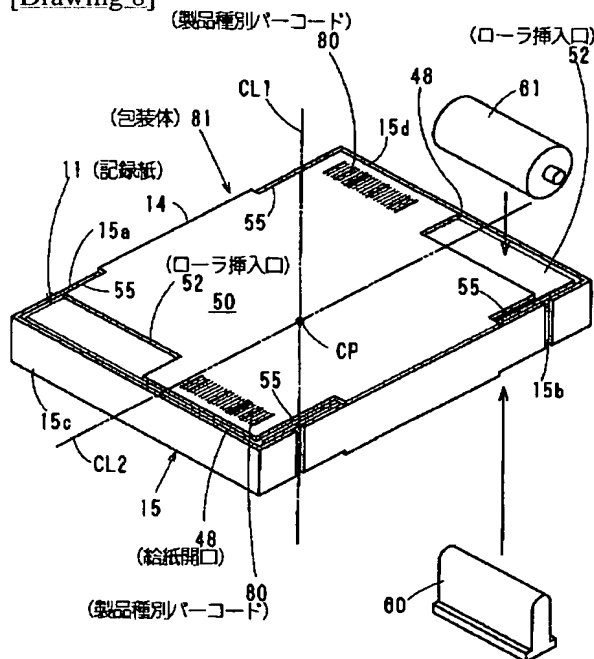
[Drawing 6]



[Drawing 7]



[Drawing\_8]



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